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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Pechanek et al.

Serial No.: 10/036,789

Filed: December 21, 2001

For: MANIFOLD ARRAY PROCESSOR

Group: 2155

Examiner: Eng, David

PATENT  
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Durham, North Carolina  
March 18, 2003Commissioner for Patents  
Washington, D.C. 20231Amendment and Response to Restriction Requirement

Sir:

Please amend the above identified application as follows:

In the Claims

Please add the following new claims:

--57. The array processor of claim 44 wherein the clusters of processing elements correspond to slices of a torus array shifted and wrapped into a cylinder.--

--58. The array processor of claim 44 wherein each processing element (PE) is defined as  $PE_{i,j}$ , where  $i$  and  $j$  refer to the respective row and column PE positions within a conventional torus-connected array, and where  $i = 0, 1, 2, \dots, N-1$  and  $j = 0, 1, 2, \dots, N-1$ , said PEs arranged in clusters  $PE_{(i+a)(ModN),(j+N-a)(ModN)}$ , for any  $i, j$  and for all  $a \in \{0, 1, \dots, N-1\}$ .--